

Capability and Learning to Choose

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Published online: 31 January 2009
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Abstract The Capability Approach (henceforth CA) is in the first place an approach to the evaluation of individual well-being and social welfare. Many disciplines refer to the CA, first and foremost welfare economics, development studies and political philosophy. Educational theory was not among the first disciplines that took notice of the CA, but has a rising interest in it. This paper argues that the CA would also profit from looking into educational theory. The first part of the paper shows why and where educational theory—or more precisely: a theory of learning—is missing in the CA. This is done in three steps: the first section gives a brief overview of the core concepts of Sen’s CA. Section “Capability and Choosing” focuses on the role of choosing in the CA. It states the views of Sen and Nussbaum on choosing and shows the shortcomings in their appreciation of choosing. In consequence, the third section derives some demands on a theory of learning in the CA. The second part of the paper presents Dewey’s educational theory on experience as a possible starting point when looking for a learning theory that lends itself to the integration in the CA. Section “Opportunity of Choosing, Experience and Education” introduces Dewey’s conception of experience, freedom of the learner, conditions of experience and education. Section “Capability and Experience” discusses how Dewey’s concepts fit into the CA. On the first glance, there are three points in which the CA and Dewey’s concepts match: the importance of freedom for human life, the role of participation in education and the need to take internal and external factors as well as their interaction into account in assessing choice situations. This establishes a basis for linking both theories. Yet, more research is needed to explore the issue further. Section “Conclusion and Outlook” concludes and sketches the lines for future research.

Keywords Capability approach · Choosing · Theory of learning · Opportunity to choose · Freedom · Experience

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The Capability Approach (henceforth CA) is in the first place an approach to the evaluation of individual well-being and social welfare. It provides (1) a general framework of thought with many possible applications, (2) a critique of welfare economics and other approaches to the evaluation of welfare and (3) proposes a new basis for interpersonal comparisons of welfare (Robeyns 2000, 2005, 2006). Because of its broad range of applications, many disciplines refer to the CA, first and foremost welfare economics, development studies and political philosophy. Educational theory was not among the first disciplines that took notice of the CA, but has a rising interest in it.

However, this paper is arguing that the CA would also profit from looking into educational theory. The first part of the paper shows why and where educational theory—or more precisely: a theory of learning—is missing in the CA. This is done in three steps: the first section gives a brief overview of the core concepts of Sen's CA. Section "Capability and Choosing" focuses on the role of choosing in the CA. It states the views of Nussbaum and Sen on choosing and shows the shortcomings in their appreciation of choosing. In consequence, the third section derives some demands on a theory of learning in the CA.

The second part of the paper presents Dewey's educational theory on experience as a possible starting point when looking for a learning theory that lends itself to the integration in the CA. Section "Opportunity of Choosing, Experience and Education" introduces Dewey's conception of experience, freedom of the learner, conditions of experience and education. Section "Capability and Experience" gives a first and preliminary picture of how Dewey's concepts fit into the CA. Section "Conclusion and Outlook" concludes and makes some suggestions for further research.

The Core Concepts of Sen's Capability Approach

The core concepts of Sen's CA are functionings (doings and beings) and capability (the opportunity or freedom to realise these functionings). Examples of functionings range from elementary ones like being adequately nourished to rather complex ones like being able to take part in the life of the community and having self-respect (Sen 1999, p. 75). The achievement of a functioning typically presupposes on the one hand the availability of certain commodities and on the other hand the ability of the individual to use these commodities accordingly. For example, the functioning to move about presupposes the availability of a bike or a car or of the money for public transport on the one hand and on the other hand the ability to ride a bike or a car or to go by bus. The individual budget set comprises all commodities feasible for a person and the set of individual utilization functions is composed of all modes of utilization a person is able to exercise. Hence, the feasibility of functionings for a person depends on (a) the budget set and on (b) the set of (individual) utilization functions (Sen 1985a, p. 11).

The level a person achieves in one functioning is not fully determined by the interaction of the budget set and the set of utilization functions. Rather, a person can achieve different levels in a single functioning and different combinations of functionings. A combination (or bundle) of functionings describes a way of living. For example, if a person moves about by riding a bike instead of going by car, she has a higher level of bodily activity and in consequence needs more nourishment, but less additional sportive activities for being healthy. At the same time, riding a bike limits the range of mobility in comparison to going by car. Thus, the level achieved in the functioning "moving about" has to be seen in combination with the levels achieved in other functionings like "being adequately nourished", "being healthy" and so on.

Sen (1985a, pp. 13–14) defines the capability set as the set of all combinations of functionings feasible for a person. The CA presumes that each individual chooses from her capability set one combination of functionings, i.e. one way of living. Hence, the capability set is said to reflect a person's freedom to lead one way of life or another. Each way of leading a life is one element or option of a person's capability set. The person is thought to be free to choose among these options. At the same time, Sen attaches intrinsic value (in contrast to instrumental value) to the opportunity to choose and claims that the freedom to choose affects well-being positively in the sense that it is an end in its own right (Sen 1988, p. 270).

Well-being of an individual depends, then, first on being and doing well (achieving a high level of functionings) and second on being free to choose a life one values. In order to evaluate the well-being of a person, the CA assesses the achieved functionings and takes into account to which extent the person was free to choose these functionings. For example, the CA claims that someone who fasts has a greater capability set and is, thus, better off than someone who is forced to starve.

Capability and Choosing

Choosing in Nussbaum

The possibility to choose a life one values is central to the CA. Nussbaum suggests that choosing (she speaks of practical reason) is a special functioning. She counts practical reason as an ability of special importance along with the ability to affiliate to others. In her view practical reason and affiliation (she calls them architectonic capabilities, Nussbaum 2000, p. 82) are abilities innate to every human being but they demand training and education in order to achieve a level Nussbaum characterizes as “truly human” or “worthy of a human being” (Nussbaum 2000, p. 73). Although her conception of capability differs profoundly from Sen's (Leßmann 2007) her sketch of a development in human abilities is instructive. She identifies three levels of functionings (she calls them functional capabilities) in the development of human beings: “basic”, “internal” and “combined capabilities”. “Basic capability” is “the innate equipment of individuals that is the necessary basis for developing the more advanced capabilities, and a ground for moral concern” (Nussbaum 2000, p. 84). An example of this is the ability of a newborn baby to see and hear and the ability for speech and language in a rudimentary way as well.

“Internal capability” is given “if and only if the person is so organized at [time] t that, should the appropriate circumstances present themselves, the person can choose an A action” (Nussbaum 1988, p. 160). This definition, thus, emphasizes the choice aspect: The person *can* choose the action, but need not. “Internal capabilities” put a person in the position “to choose well and act well”. They are “traits of intellect and character and body” (Nussbaum 1988, p. 160) “developed by education” (Nussbaum 1988, p. 161). Still a person “may be prevented from functioning in accordance with it” (Nussbaum 2000, p. 84) if the appropriate circumstances do not present themselves. Therefore the notion of “combined capabilities” stands for the combination of “internal capabilities” with suitable external conditions. “Combined capability”¹ is given “if and only if at [time] t the person

¹ Nussbaum 1988, p. 164 introduced this concept calling it “external capability”. This notion was criticised by Crocker (1995) and Gasper (1997, p. 261) as misleading since it stands for the extent to which an internal capability can be exercised given external conditions. As a consequence, Nussbaum (2000, p. 84) changed it to “combined capability” indicating the combination of internal capabilities with external conditions.

[has the internal capability] of A and there are no circumstances present that impede or prevent the exercise of A" (Nussbaum 1988, p. 164). Nussbaum (2000, p. 85) gives the following example: "Citizens of repressive nondemocratic regimes have the internal but not the combined capability to exercise thought and speech in accordance with their consciences." Of course, the ability to think and express one's views is discouraged in repressive nondemocratic states. Nussbaum points to the necessity to encourage and develop certain skills in order to exercise these functionings. She states that "[t]he distinction between internal and combined capabilities is not a sharp one, because developing an internal capability usually requires favourable external conditions" (Nussbaum 2000, p. 85). Inhabitants of democratic regimes have the opportunity to express their views in public without fear of suppression. By exercising this functioning people develop and strengthen it. Without this opportunity not only the level "combined capability" is low, but the level "internal capability" remains poor as well.

In the case of choosing (or practical reasoning) it seems that on the one hand Nussbaum suggests that we can identify the three levels of "basic", "internal" and "combined capabilities" as well. On the other hand the exercise of choice gets a special role in her conception. Choosing can be seen as a "basic capability", i.e. as an innate equipment of human beings that is the basis for achieving more advanced levels. The level "internal capability" of choosing is characterized by the ability to exercise choice. Thus, choosing is a functioning, but at the same time its exercise is a precondition for exercising all other functionings. In that sense it is an architectonic functioning that suffuses the other functionings.

A high level of functionings as "internal capabilities" can only be achieved if "the appropriate circumstances present themselves" (Nussbaum 1988, p. 160). In the case of choosing this means that the person has the opportunity to choose functionings and levels of functionings. In order to develop a functioning or "internal capability" further training and education is necessary. With regard to choosing this training is provided by the exercise of choice among functionings themselves and levels of functionings. Hence, Nussbaum's CA offers an idea of how functionings develop in general and how the ability to choose evolves through its exercise related to the other functionings in particular.

Conditions of Choosing in Sen

In Nussbaum's CA the opportunity to choose is not modelled further. Since she wants to treat functionings separately in the evaluation of well-being, she does not provide a holistic model of choice situations. Rather she demands to acknowledge the importance and distinct quality of the individual functionings and is opposed to trade-offs between single items (Nussbaum 2000, p. 81). At the same time, she emphasises that the diverse functionings "are related to one another in many complex ways" (Nussbaum 2000, p. 81).

In contrast to that, Sen models the choice situation in the form of a capability set. The interrelation between the different functionings is implicitly present since the elements of the capability set consist of bundles of functionings, not individual functionings. Kaufman (2006, p. 299) hints at this characteristic of Sen's CA when he points out that "Sen focuses on freedom of choice over combinations of functionings that may be realized simultaneously (vectors of corealisable functionings)". According to Sen's (1985a, see above) formal description the size of the capability set depends on (1) the budget set (external conditions) and (2) the set of individual utilization functions (internal conditions). However, Sen does not question the ability of people to choose nor does he explore the conditions that enhance this ability. Cohen has criticized Sen's emphasis of choosing

because it demands some kind of athleticism of the people: “What I cannot accept is the associated athleticism, which comes when Sen adds that ‘the central feature of well-being is the ability to achieve valuable functionings’ (Sen 1985b, p. 200). That overestimates the place of freedom and activity in well-being.” (Cohen 1993, p. 25)

While I do not share Cohen’s criticism against Sen’s emphasis on freedom I think he raised an important point: Sen presumes everyone to be able to choose. Whether actively pursued or passively received, Sen interprets the achievement of a particular way of life in his model as the result of choice. However, choosing is itself a “doing”. Sen (1987, p. 37; 1985b, p. 202) admits that choosing can be regarded as a functioning. Thus, the relationship between functionings and capability is characterized by a certain circularity (Sen 1985b, p. 202). Since functionings define the evaluative space of the CA, they also define the space in which capability sets are defined. The person who chooses a functioning bundle from a capability set applies already one of the functionings she is choosing, namely choosing itself. After acknowledging this circularity, Sen (1987, p. 37) goes on to emphasise that the “formal problems of characterisation ... are perhaps not ultimately very important” since “what is really significant in all this is to accept the legitimacy of certain freedom-type considerations as part of the conditions of life”. The circularity within the CA has not been explored further much less dissolved since then. Meanwhile the introduction of freedom-type considerations into the evaluation of well-being has been welcomed, if only as a theoretical objective which is difficult to implement empirically (e.g. Basu 1987, p. 75).

What is missing in Sen’s model is any description of temporal interactions. As it is, Sen’s CA is a comparative static model. He assumes choice situations, but does not link them. Thus, one could compare two choice situations by comparing the capability sets and the bundles of achieved functionings, but nothing further. Given Sen’s (1999, p. 17) positive attitude towards procedural arguments this comes as a surprise. However, taking account of the analogies between Sen’s CA and consumer choice models in economics and reading closely his argumentation, it seems that Sen is satisfied with modelling the “process aspect” by allowing for choosing one functioning bundle out of the capability set.

Education, Choosing and Social Conditioning

In contrast to Sen Nussbaum hints at temporal aspects in the formation of functionings by pointing at the necessity of education for developing functionings. Sen does not deny the importance of education in the course of enhancing individual capability (e.g. Sen 1999, p. 295), but neither he nor Nussbaum go much further. As Unterhalter (2001, p. 1) states: “In the capabilities approach education appears undertheorized”.² Sen in particular presumes every person to be able to choose without any discussion of how this ability develops. At the same time, he does not take all decisions on their face value. Rather he questions the ability of some people to evaluate their situation correctly and choose adequate bundles of functionings because of the impact of social conditioning on their decisions. This is particularly obvious in his account of a questioning of widows and widowers after the Bengal Famines of 1943. In contrast to the widowers (men that is) most of the widows (women) did not complain about their health status. Sen interprets this as an illustration of how the “underdog learns to bear the burden so well that he or she overlooks the burden itself” (Sen 1984, p. 309) and calls it an example of “social conditioning” (Sen 1992, pp. 149–150).

² In fact, most papers on education and the CA take an empirical route and are focused on developing a capability perspective in education science, see the bibliography on education and the CA is at: <http://fas.harvard.edu/~freedom/files/Capability-and-Education.pdf>.

Demands on a Theory of Learning in the CA

There is a gap within the CA concerning how people decide to live one way of life or another and how their decisions come about. The relation between functionings and capability is circular in that the functioning of choosing is a precondition of choosing one bundle of functionings out of the capability set. A model of the temporal interactions between achieved functionings and the capability set is missing in the CA.

Any theory of learning that is to fill this gap in the CA has to respond to the existing features of the CA. In Sen's as well Nussbaum's CA freedom to choose is central since choosing is a distinctive characteristic of human life. Sen goes further than Nussbaum in modelling freedom to choose as the opportunity to choose one element out of the capability set. But it is Nussbaum who points out that the ability to choose develops and has to be developed in human beings. Thus, she is the one who establishes the need for a model of temporal interactions. Both, Sen and Nussbaum emphasize that the choice situation is defined by external as well as internal factors. Sen considers external conditions in form of the budget set. He further describes the complex ways in which the environment—social, geographical and climatic—influences the individual life (without, however, modelling this influence). By way of the set of utilization functions he takes the internal conditions a person possesses into consideration. Nussbaum simply speaks of internal and external conditions. She highlights the changes and development of internal conditions pass in the course of time. She further describes the mutual influence of internal and external conditions.

Hence, a theory of learning in the CA has to be first and foremost a theory of how human beings learn to choose or learn how to take decisions. It should respect the special importance Sen and Nussbaum put on choosing. It should be compatible with the model and formal rigidity of opportunity sets. It should match the ideas of Sen and Nussbaum how external and internal factors combine. And it should contain some more explicit ideas on the development of the ability to choose. The changes and temporal interactions between former decisions and actual choice situations, between internal and external conditions should be explained and modelled in more detail for example by looking at sequences of capability sets.

In the following, the writings of John Dewey on experience and education are presented as one possible starting point for filling the gap in the CA.³

Opportunity of Choosing, Experience and Education

Experience as the Core Category

In Dewey's philosophy of education experience is the central category. He advocates a "new" or "progressive" education that is based on experience. Instead of imparting knowledge in the "traditional" way by means of reading books and repetition, "new" education aims at giving the pupil the opportunity to experience how things are connected and draw his own conclusions. Of course, the "traditional" methods of teaching and

³ I am indebted to Matthew Braham and Manfred Holler for bringing John Dewey's writings to my mind and suggesting the affinity of Dewey's theory of experience to Sen's understanding of freedom. Any interpretations of conceptions presented here, however, sprang from my own thinking and nobody but me is to blame for misunderstandings.

learning (books and repetition) also constitute experiences, but Dewey (1938, p. 26) suspects that “the experiences which were had, by pupils and teachers alike, were largely of a wrong kind”. According to Dewey (1938, p. 27) the quality of experiences depends on “the immediate aspect of agreeableness or disagreeableness” and on “its influence upon later experiences”.

Dewey identifies two principles that govern experiences: the principles of continuity and of interaction. The former “means that every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after” (Dewey 1938, p. 35). Thus, past, present and future experiences are connected. Past experiences form the background for new experiences. They shape preferences and attitudes towards further experiences and affect the assessment of new experiences. At the same time past experiences influence the external conditions under which new experiences are had: “Every genuine experience has an active side which changes in some degree the objective conditions under which experiences are had.” (Dewey 1938, p. 39) For example, a child who learns how to read and write makes a new experience and enlarges at the same time its set of methods for subsequent learning. But there are also examples of experiences that limit the capacity of the child for further learning, if for instance, the parents tend to spoil their child and the child experiences that everything is done for him by others.

The second principle, the principle of interaction, “means ... that interaction is going on between an individual and objects and other persons” (Dewey 1938, p. 43). This principle points to the fact that any experience is created by sources outside an individual be it other persons or objects. The individual answers these stimuli from outside sources. Thus, there are objective conditions which give rise to experience and internal conditions that affect the experience. Both factors—objective and internal conditions—“[t]aken together, or in their interaction, they form what we call a *situation*” (Dewey 1938, p. 42). The individual in its present state and with its set of experiences meets an environment made up of persons with whom it talks and objects like toys, books or ingredients for a cake he is baking. In such a situation transaction is taking place between the individual and its environment.

Life is formed by the situations that succeed each other. Living in a world means that individuals “live in a series of situations” (Dewey 1938, p. 43). Thus, the two principles of continuity and interaction combine: What the person learns in one situation carries over to the next situation and builds up her internal condition in new situations: “What he has learned in the way of knowledge and skill in one situation becomes an instrument of understanding and dealing effectively with the situations which follow.” (Dewey 1938, p. 44) If this process is successful the person integrates the various successive experiences and construes a world of related objects. This world forms the background for any new experience which in turn shows further relations between the objects of the world and contributes to its construction.

Freedom of the Learner

Learning is, thus, an active process: The learner changes the conditions of experiences in that his view of the world forms the background of any new experience. This activity of constructing a world involves observation and judgment. It consists in exercising what Dewey (1938, p. 61) calls “freedom of intelligence” and is in his view the “only freedom that is of enduring importance”. It’s freedom in its positive sense: freedom as the “power to frame purposes, judge wisely, to evaluate desires by the consequences which will result from acting upon them; power to select and order means to carry chosen ends into operation” (Dewey 1938, p. 64).

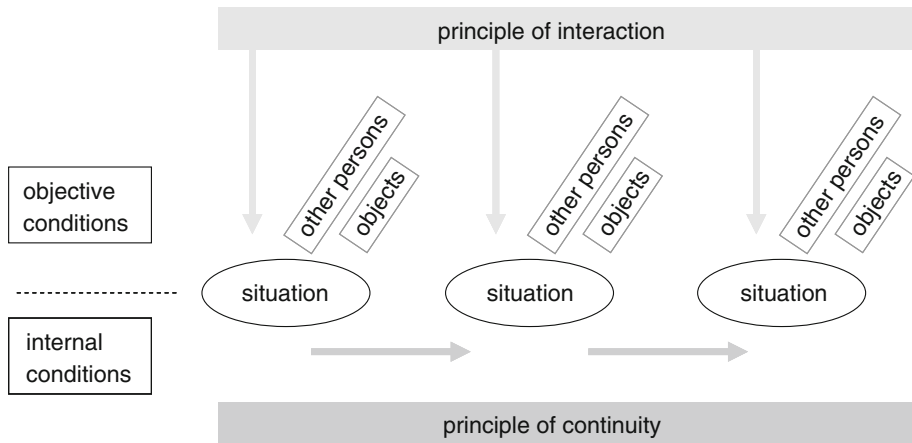
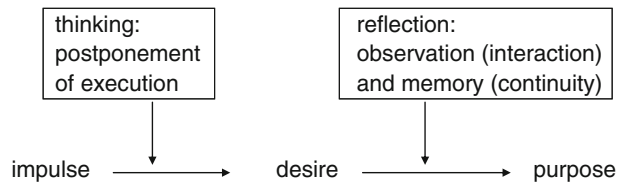


Fig. 1 Dewey's concept of experience

Fig. 2 Dewey's concept of self-control



At the outset there is always an impulse which converts into a desire if it cannot be executed immediately. Desires are the “ultimate moving springs of action” (Dewey 1938, p. 70), but they are not a final end. The intensity of the underlying desire directs the strength of the efforts undertaken to fulfill the desire,⁴ but a desire in itself is still not a purpose. Framing a purpose involves “foresight of the consequences which will result from acting upon impulse” (Dewey 1938, p. 67). It involves, thus, observation of the actual circumstances, recollection of previous similar experiences and, finally, judgment on the consequences of the particular desire.

It is this power to reflect the options of action before following an impulse what Dewey (1938, p. 64) calls “self control”. “Thinking is a postponement of immediate action, while it effects internal control of impulse through the union of observation and memory, this union being in the heart of reflection.” (Dewey 1938, p. 64) In Dewey's view the creation of power of self-control is the ideal aim of education.

In the course of the conversion of an impulse into a desire and then into a purpose the learner executes her freedom of intelligence by pausing, by reflecting on her impulse, by thinking of the consequences of her desire, and by finally framing a purpose which directs her activities in the learning process. “Such freedom is in turn identical with self-control” (Dewey 1938, p. 67). Hence, one could restate the aim of education in saying that freedom of intelligence is the objective of progressive education.

⁴ In Dewey's conception desires are a forceful motivation, but their value is merely instrumental. The objective of human activity is not the fulfilment of desires but the creation of self-control. Therefore his concept should not be confused with the concept of utility as desire fulfilment.

External Conditions and Social Control

Dewey's theory of learning is a theory of education. He thinks of learning as a co-operative task of the learner and the educator. The educator acts as a guide and supports the learner in framing purposes. This guidance is not a restriction but an enhancement of the learner's freedom of intelligence (Dewey 1938, p. 71). However, the theory is based on experience. Hence, the educator has to look at the situation of the learner, i.e. the objective and the internal conditions. The principle of continuity shapes the internal condition of the learner. The principle of interaction highlights the importance of external conditions in general and the social environment of the learner in particular: "all human experience is ultimately social: ... it involves contact and communication" (Dewey 1938, p. 38)

"The immediate and direct concern of an educator is ... with the situations in which interaction takes place. The individual, who enters as a factor into it, is what he is at a given time. It is the other factor, that of objective conditions, which lies to some extent within the possibility of regulation by the educator." (Dewey 1938, p. 45) Dewey points out that "the phrase 'objective conditions' covers a wide range" starting with equipment, books and material going on with tasks and games played up to the tone of voice and the *social* set-up of situations. Thus, in Dewey's view, the educator forms situations to a great extent. He has direct command over certain objective conditions like the material, the tasks he arranges and his own actions. He further influences the social set-up of the situations and takes the internal conditions of the individual learners into account: "The principle of interaction makes it clear that failure of adaptation of material to needs and capacities of individuals may cause an experience to be non-educative quite as much as failure of an individual to adapt himself to the material." (Dewey 1938, pp. 46–47)

The educator, thus, sets some of the objective conditions in order to make the experience of the learner educative. Still, the educator is not an "external boss or dictator but takes on [the position] of leader of group activities" (Dewey 1938, p. 59). Education is a co-operative task and the educator is a guide, but at the same time he is part of the group. The educator has a special responsibility for the individuals involved and the subject-matter to learned. This includes a responsibility for knowing the individual learners and their internal conditions, i.e. their prior experiences and state of knowledge and understanding of the world. His responsibility comprises as well a responsibility for choosing a subject-matter to which all individuals have an opportunity to contribute something and in which all participate. Then it is the activities shared by the group that is the chief carrier of control: "the primary source of control resides in the very nature of the work done as a social enterprise in which all individuals have an opportunity to contribute and to which all feel a responsibility" (Dewey 1938, p. 56).

This kind of control—social control—is not opposed to individual freedom since "those who take part do not feel that they are bossed by an individual person or are being subjected to the will of some outside superior person" (Dewey 1938, p. 53). They rather form a group or community that shares a common experience. Dewey illustrates the controlling features of shared activities by games played by children. Games involve rules and "without rules there is no game" (Dewey 1938, p. 52). But at the same time rules are part of the game. Playing the game involves accepting the rules and acting accordingly. Only then it is possible to complain if some other player does not follow the rules. Rules in games are standardized conventions and obtain their force through the recognition of a large group of people. Hence, participation in a game means sharing the experience of a large group of people and following a common set of rules—and not subjection to a dictator.

Capability and Experience

There are some obvious points in which Dewey's theory of learning and the CA match: Both discuss the importance of freedom for human life. Both emphasize the active part of individuals in taking decisions. Both consider the combination of external and internal factors in any choice situation. Still, these similarities may be superficial only.

Dewey does not write on "choosing" as such. But he points out that the learner plays an active part in the process of learning. In particular, the learner frames and executes purposes. Thereby he converts an impulse into a desire by reflecting and—thinking of the consequences of his desire—has to judge his desire and decide on its fulfilment. Thus, framing purposes is a decision process and can be seen as choosing between the fulfilment or non-fulfilment of the desire as well as choosing the way to fulfil it.

Hence, choice in Dewey is modelled in the first place as a process and not as the choice from a given opportunity set. Yet, Dewey's concept of a "situation" bears some similarities to Sen's concept of a capability set: A "situation" in Dewey is defined through the objective conditions that give rise to an experience and the internal conditions that affect how the person digests the experience. A capability set in Sen is defined through the combination of commodities available and the ways of utilization of these commodities a person has at hand. Sen's budget set does not describe Dewey's objective conditions in a comprehensive way, but it includes all material aspects of those conditions. What the budget set leaves out are the social aspects of the learning environment. Sen's set of utilization functions mirrors Dewey's internal conditions in a fairly comprehensive way: It describes the individual abilities and characteristics relevant for using goods in order to achieve certain functionings taking individual peculiarities into account. Dewey explains some of the peculiarities by pointing to the individual history of experiences and the resulting construction of a world of related objects.

In this last respect, Dewey and Nussbaum agree. They both outline temporal aspects of individual development. Dewey explains the ability to decide in a situation by the principle of continuity and draws a link to former experiences and observations. He thus sketches more explicitly than Nussbaum how the ability to choose develops and, in contrast to her, refers to a more comprehensive choice situation similar to Sen's capability set. Learning in Dewey is the process of integrating various successive experiences and constructing a world of related objects accordingly. Thus, in Dewey learning takes place in a sequence of situations. The situations are linked through the principle of continuity in experience while the principle of interaction directs our attention to the unique combination of objective conditions in a situation that distinguishes it from others.

By transferring these ideas to the CA learning is viewed as the result of living through a sequence of capability sets. The individual chooses one element out of her capability set that results from the combination of available commodities from the budget set and individual traits portrayed in the set of utilization functions. Dewey's theory complements this model by explaining the individual traits with a person's history of experiences and by pointing to social beside material conditions of living. Choosing in the sense of forming purposes is trained in the course of time by choosing from chained capability sets.

Conclusion and Outlook

The CA in its current version does not provide a theory on how individuals learn to choose although the ability to choose is one of the core assumptions of the CA. This paper views

the lack of a theory of learning in the CA as a shortcoming and specifies the reasons why the CA is in need of such a theory. Firstly, the assumption that individuals are able to make decisions on their life situation needs explanation and justification. Secondly, choosing occupies a central position in the CA as both, Sen and Nussbaum, acknowledge. The functioning of choosing therefore deserves a more detailed investigation of its preconditions and effects. Thirdly, there is a circularity in the relation between the functioning of choosing and the capability concept since the CA presupposes the ability to choose from the capability set. This circularity needs dissolution. Fourthly, the description of functionings and capabilities in Sen and Nussbaum suggests their development and education, but the formal model of Sen is at best to be seen as a comparative static model and Nussbaum's ideas on the development of functionings are not modelled formally, do not catch the feature of co-realizability of functionings and remain sketchy. Fifthly, the lack of a model of temporal interaction in the CA is widely acknowledged, but none of the rare contributions on this aspect links capability sets temporally or focuses on the development of the functioning of choosing. Finally, the CA emphasizes the importance of beings and doings for human life. In consequence, the CA should be interested in how human beings develop these doings and beings, how they learn to function and function well.

Dewey's book on "experience and education" provides some ideas on how people learn and develop. According to Dewey, experience is crucial in the learning process. Experience is governed by two principles: (1) the principle of continuity claims that former experiences prepare a person for following ones and (2) the principle of interaction emphasizes that every experience takes place in a specific context and arises because of that context. Hence, we find two kinds of factors that contribute to any experience: internal factors that are formed by the individual history of experiences and objective or external factors presented by the social and material environment. Since Sen and Nussbaum also identified these two groups of factors in defining a choice situation this finding connects both theories. The first tentative connection of the two theories suggests that this link is worth following up.

However, the compatibility of Dewey's concepts with the formal presentation of opportunity sets has to be analysed further. Dewey's concept of a situation has been associated with Sen's concept of a capability set which is seen as an opportunity set (Pattanaik and Xu 1990). Consequently, the interpretation of a sequence of situations in Dewey as a sequence of opportunity sets⁵ has to be scrutinized. It is not only the compatibility of Dewey's conception with the formal rigidity of the concept of opportunity sets that has to be examined, but also its correspondence with existing ideas on temporal interactions between opportunity sets that can be found in the literature (Traeger 2003).

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⁵ See on the concept of opportunity sets and its application (Barbera et al. 2004). On an interpretation of opportunity sets as a formal presentation of freedom see Sugden (1998).

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